Abstract

Data items are represented by trees and stored in a database, the collection of data items defining a forest. Queries and masks are also represented by trees. A method for navigating the forest of data items is disclosed in the context of a graphical user interface. A set of operations on trees are defined such that the data items can be queried on the basis of structure as well as node values. That is, the query can include a specification of the relationship between nodes in a tree, as well as the data in the nodes themselves. Exemplary implementations of such operations are disclosed in the context of a database update procedure. Additionally disclosed are methods for efficiently storing and processing the forest of data items.

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